Ultrasound Scanner

Model EUB-405 PLUS

TECHNICAL GUIDE
--- Installation ---

HITACHI MEDICAL CORPORATION

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This Technical Guide is a manual to install the **EUB-405 PLUS** ultrasound scanner and its peripheral devices (option).
Since installation service engineer, please hand this installation manual to him.

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1. Installation of EUB-405 PLUS main unit

1.1 Packing list

(1) Main unit	1
(2) Remote controller (EZU-RH1)	1(OPTION)
(3) Ultrasound jelly	2
(4) Power cable	1
(5) Fuse	1set
(6) Cleaning cloth	1
(7) Cable spool	1
(8) Pan head screw M4×12	2
(9) M4 flat washer	2
(10) M4 spring washer	2

1.2 Setting cable spool

Remove four screws on the rear panel, and referring to Fig.1-1 set the cable spools. The cable spools are used to wind up the power cable. Therefore, it is not necessary to set the spools in case the cable spools will not be used such that the EUB-405 PLUS is used on the mobile cart EZU-D405B or the main unit is not moved around.

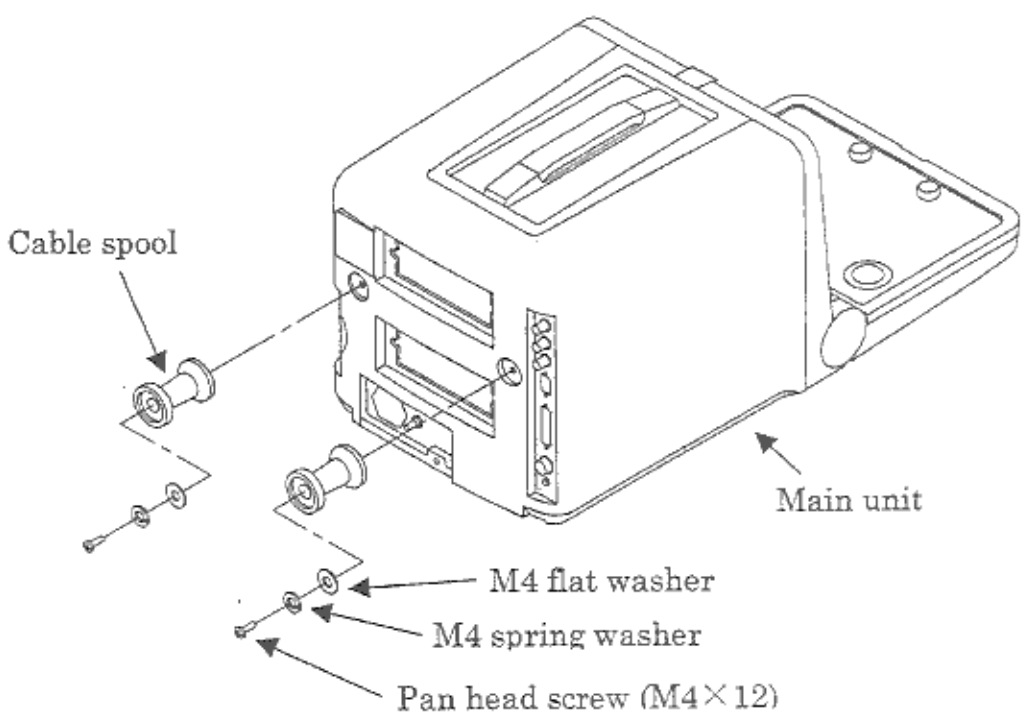


Fig. 1-1 Setting cable spool

1.3 Cable connection of video printer

Video printer and EUB-405 PLUS are connected as shown in Fig. 1-2 .
Set the 75Ω (impedance) selection switch to OFF.

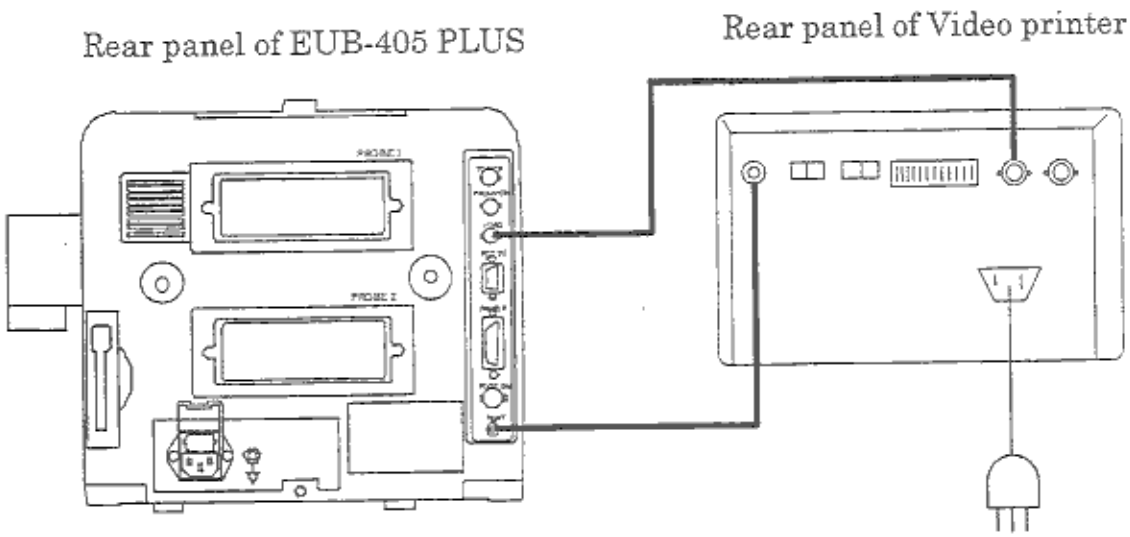


Fig. 1-2 Cable connection

Cable connection from video printer

Main unit	Video printer	Cable name
–	~AC IN	Power cord
VIDEO	VIDEO IN	BNC-BNC cord
PRINT	REMOTE	Stereo mini-cord

1.4 Cable connection of video cassette recorder

Video cassette recorder and EUB-405 PLUS are connected as shown in Fig.1-3.

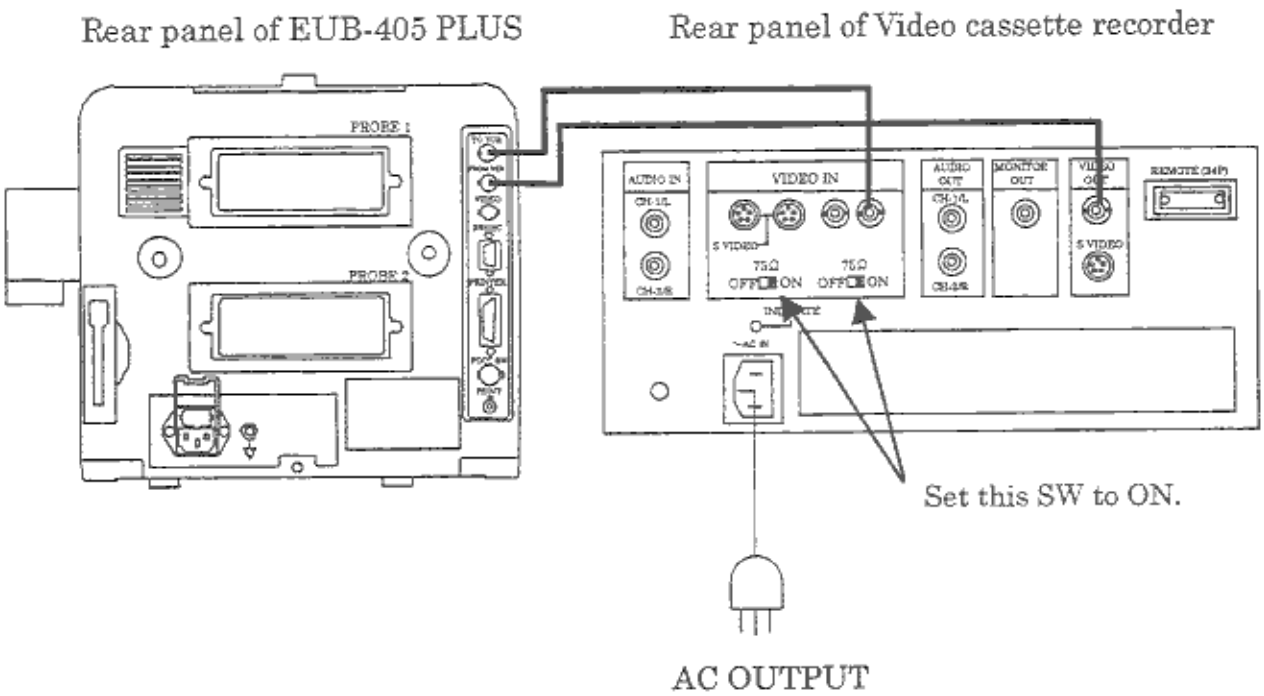


Fig.1-3 Cable connection

Cable connection from video cassette recorder

Main unit	video cassette recorder	Cable name
—	~AC IN	Power cord
TO VCR	VIDEO IN	BNC-BNC cord
FROM VCR	VIDEO OUT	BNC-BNC cord

2. Installation of simple cart (EZU-D405B)

2.1 Packing list

(1) Top cover
(2) Frame
(3) Printer stand
(4) Base
(5) M4 bolt (small) 6set
(6) M4 bolt (long) 4set
(7) M10 bolt 2set
(8) M3 screw : 4 (for the printer fixation)
(9) Socket screw , Wrench , Clip, Clamp

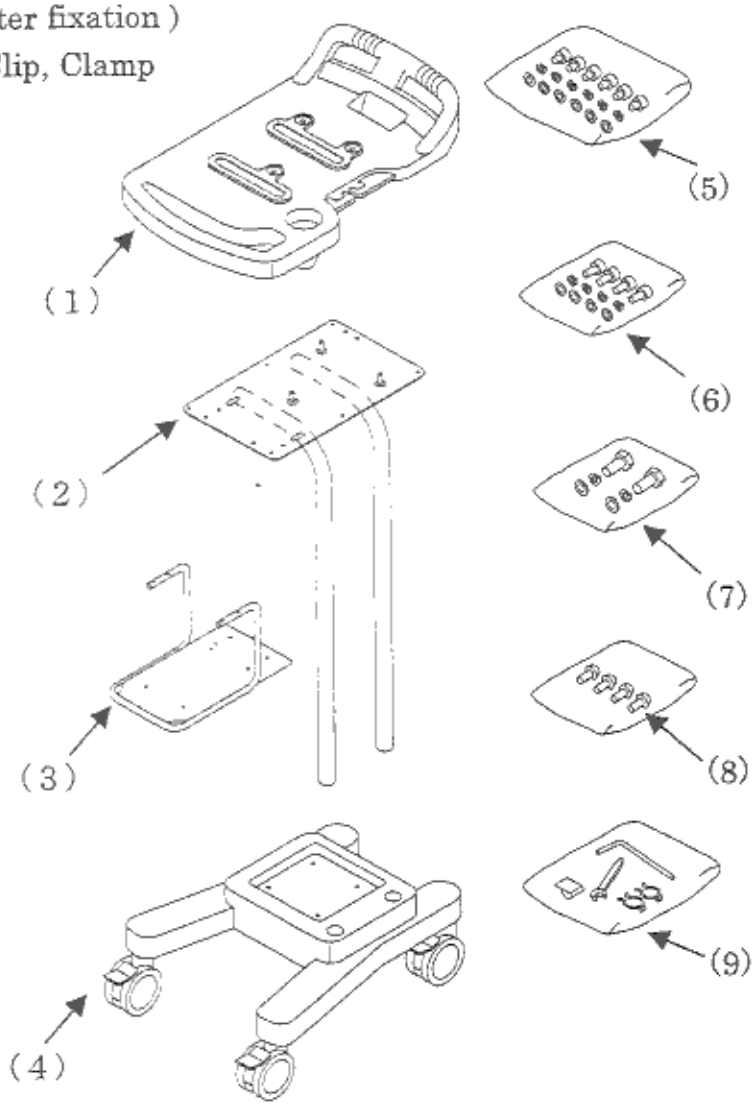


Fig.2-1 Packing list

2.2 Assembling simple cart

(1) The frame is inserted in the base, and fixed in two M10 bolts.
(2) The printer stand is passed through the frame, and fixed in four M4 bolts (long).
(3) The top cover is put on the frame, and fixed in six M4 bolts (small).
(4) The clip is inserted in the hole of the pipe of the frame.
(5) The clamp is stuck on the back of the frame.

*A necessary tool is attached to the accessories.

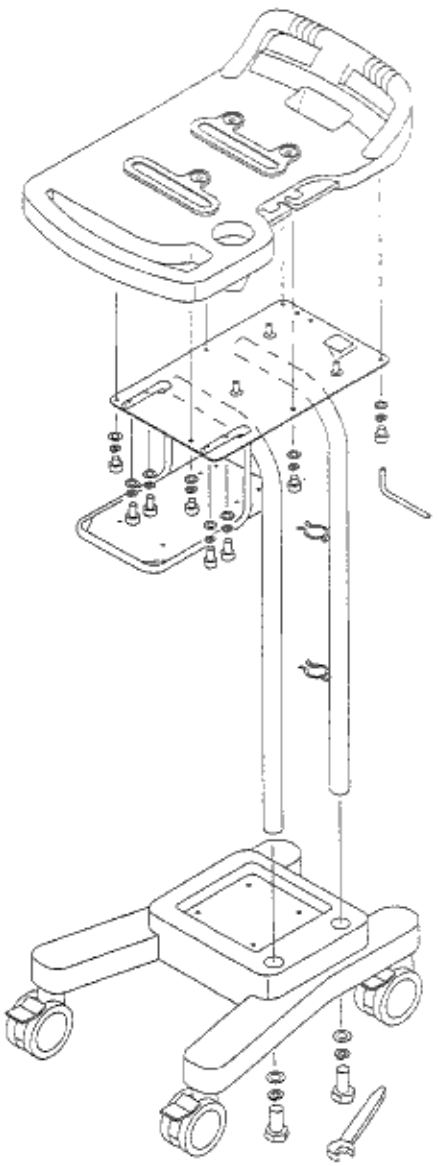


Fig.2-2 Assembling simple cart

2.3 Installing main unit on cart

(1) A main unit is put so that a rubber foot may go into the concavity of cart, and fixed with knurling knob(three) of the back.
(2) The screw of the rubber foot of the video printer is removed and put on cart. It is fixed with the M3 screw that it is attached to cart.
(3) A cable is connected. (1.3 chapters reference.)
(3) A cable is passed through the clip of the pipe, and collected politely.

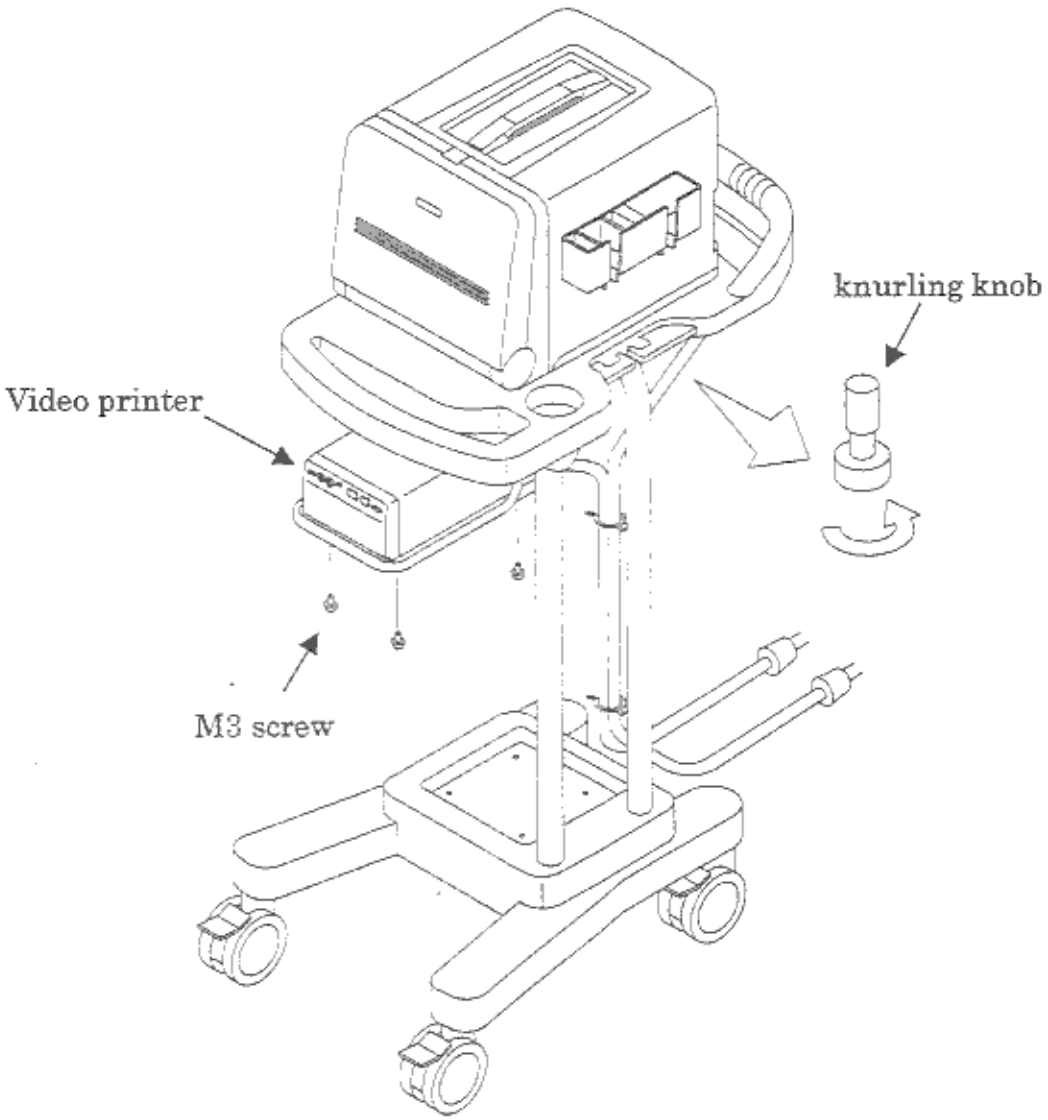


Fig.2-3 Installing main unit on cart

2.4 Video cassette recorder install in the simple cart

*Video cassette recorder can be put on simple cart by using
VCR STAND SET/D405B(another order).

(1) The clip of the base is removed, and a VCR stand is fixed with the M4 screw.
(2) Video cassette recorder is put on the VCR stand, and fixed with the belt.
(3) A clamp is affixed on the back of the frame, and a cable is connected.
(1.4 chapters reference.)
(4) A cable is passed through the clamp of the clip of the pipe and the frame, and collected politely.

NAME : VCR STAND SET /D405B
PAST No . 7313996A

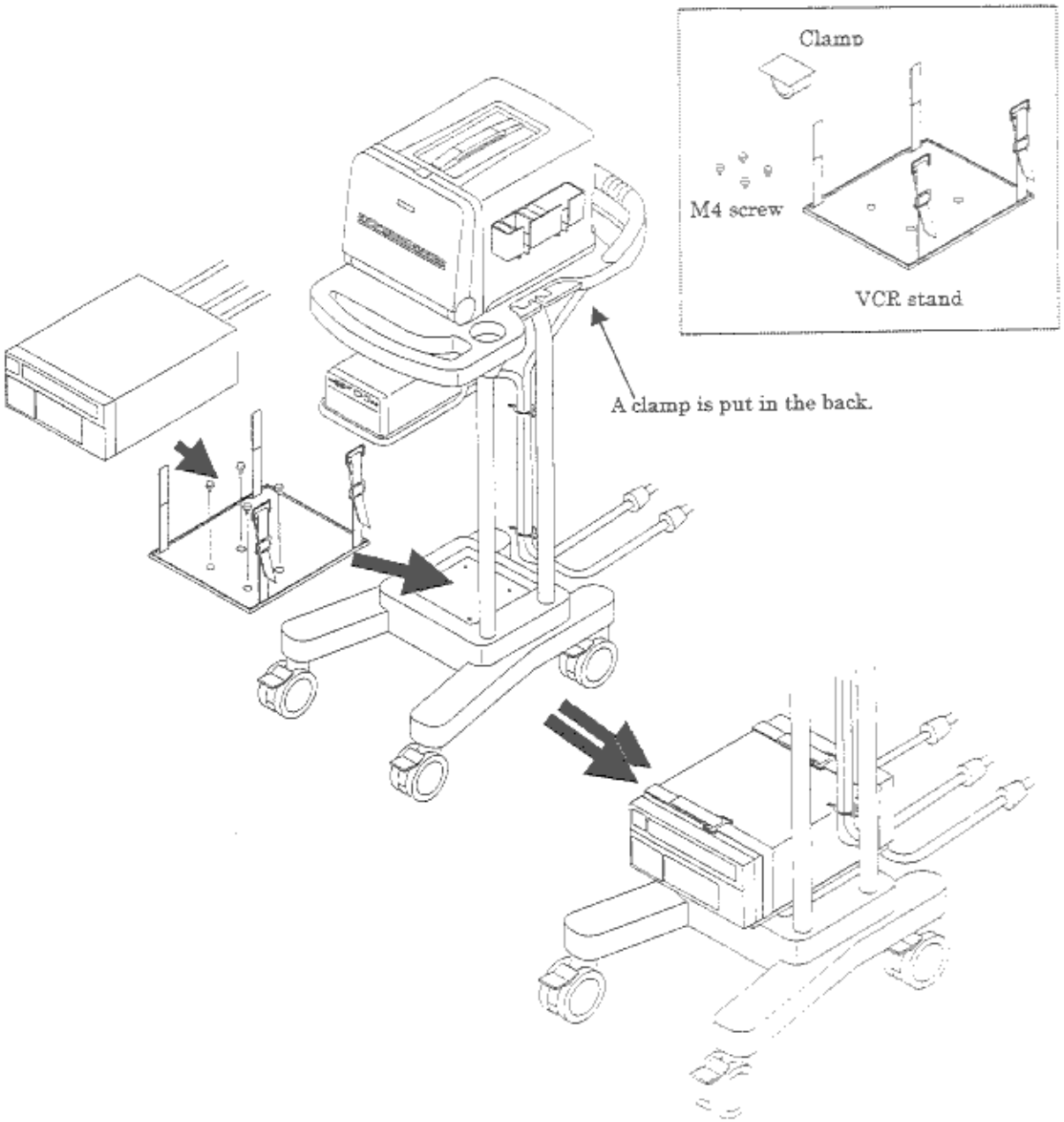
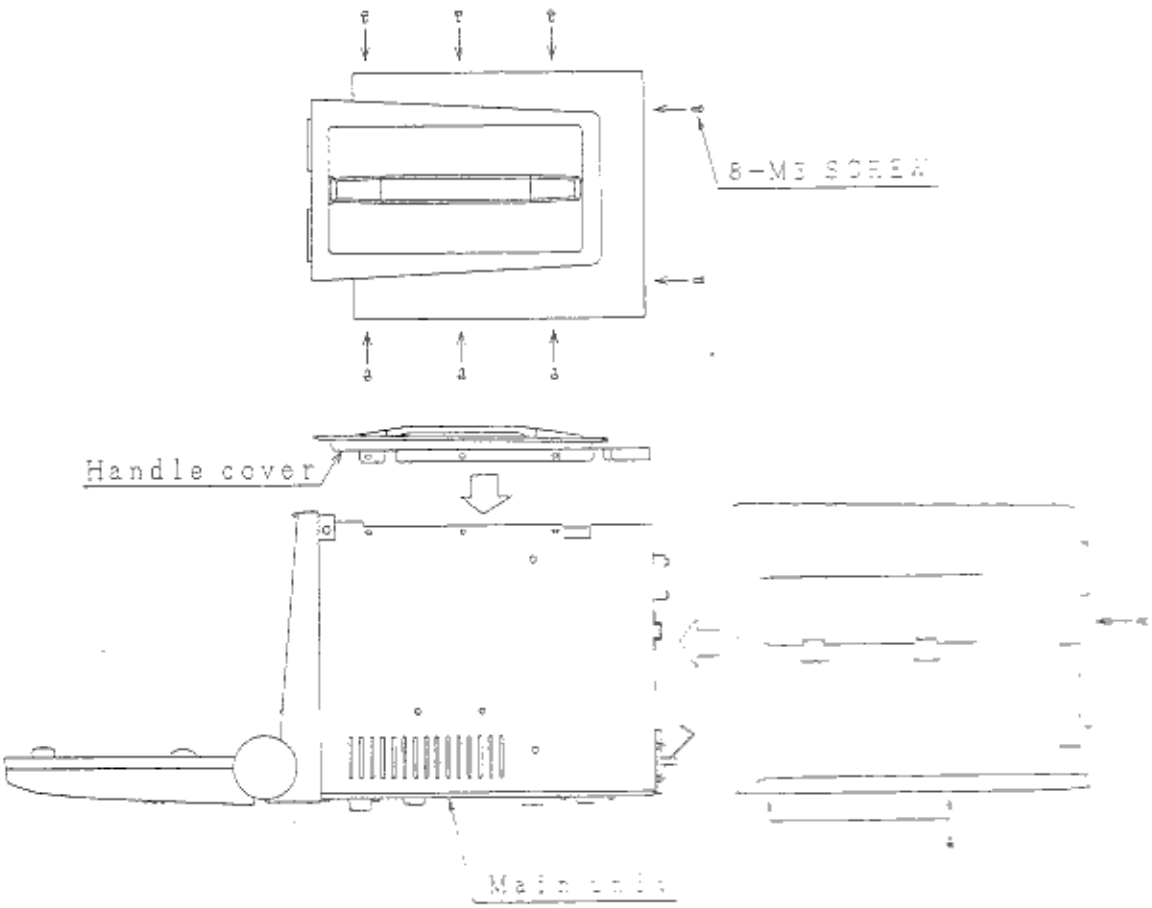


Fig 2-4 Video cassette recorder install in the simple cart

Installation, the precaution of the maintenance work

〔 For the safety.〕

EUB-405 PLUS main unit is the structure that a handle cover takes all the loads. Therefore, do the fixation of the screw securely to avoid danger due to the drop. the damage, and so on when you remove a handle cover by the installation and the maintenance.
And, exchange it for the new screw when there are rust, a wound, and so on in the screw.



3. Installation of multi-memory unit (EZU-MM10A)

3.1 Packing list

(1) Memory card I/F PCB
(2) Connection cable
(3) Shield cover
(4) Revision label
(5) M3 screw : 8

3.2 Mounting multi-memory unit

(1) Main cover, a handle cover, DSC shield cover are removed.
(2) Cover plate is removed and moved to the side of the main unit.
(3) A memory card I/F PCB is installed, and a connection cable is connected to the CNC2 connector of the DSC PCB. (Be sure to pass a connection cable through the clamp.) shield cover is installed.
(4) A cover is returned to the cause, and revision label is stuck on the back of the main unit.

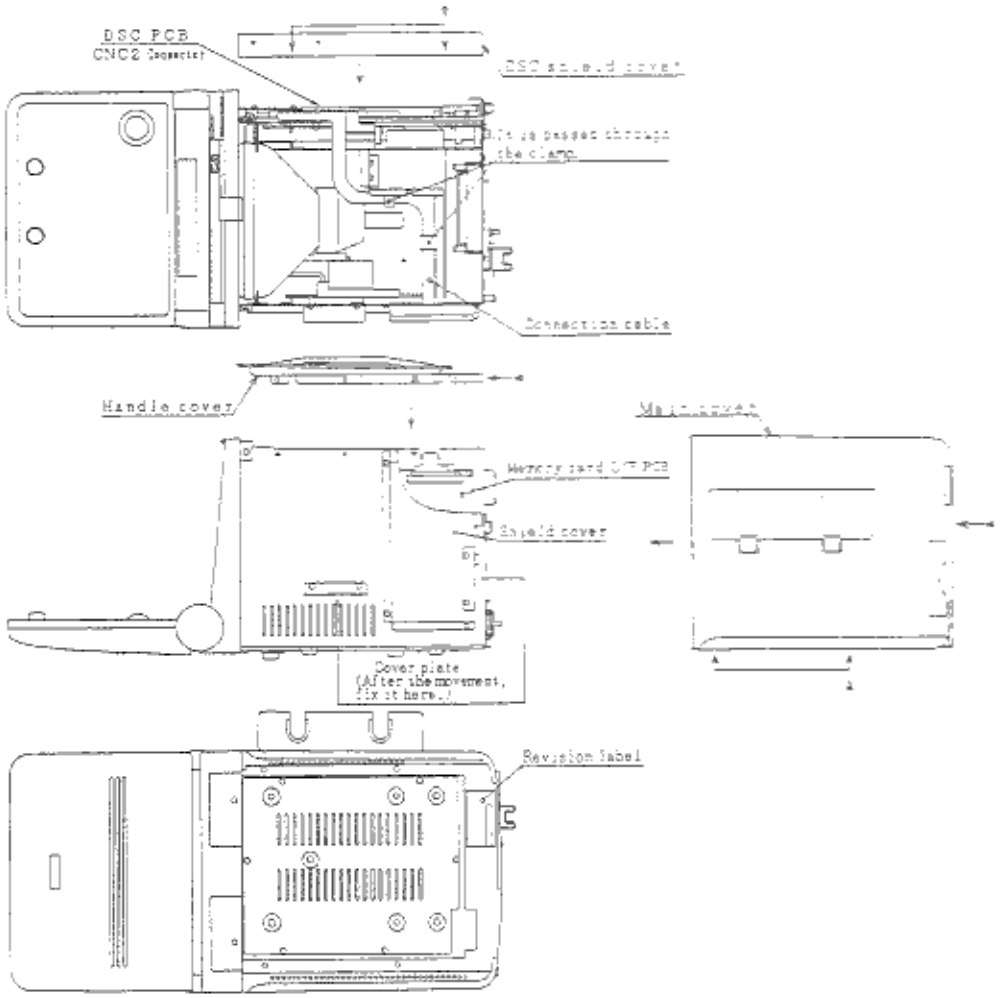


Fig.3-1 Mounting multi-memory unit

4. Installation of cine-memory unit (EZU-MM12A)

4.1 Packing list

(1) Cine-memory card PCB
(2) Revision label
(3) M3 screw : 2

4.2 Mounting cine-memory unit

(1) Main cover, DSC shield cover are removed.
(2) A nine-memory card PCB is installed in the DSC PCB.
(3) JP2,3 of the DSC PCB is changed in 2-3P space →1-2 space.
(4) A cover is returned to the cause, and revision label is stuck on the back of the main unit.

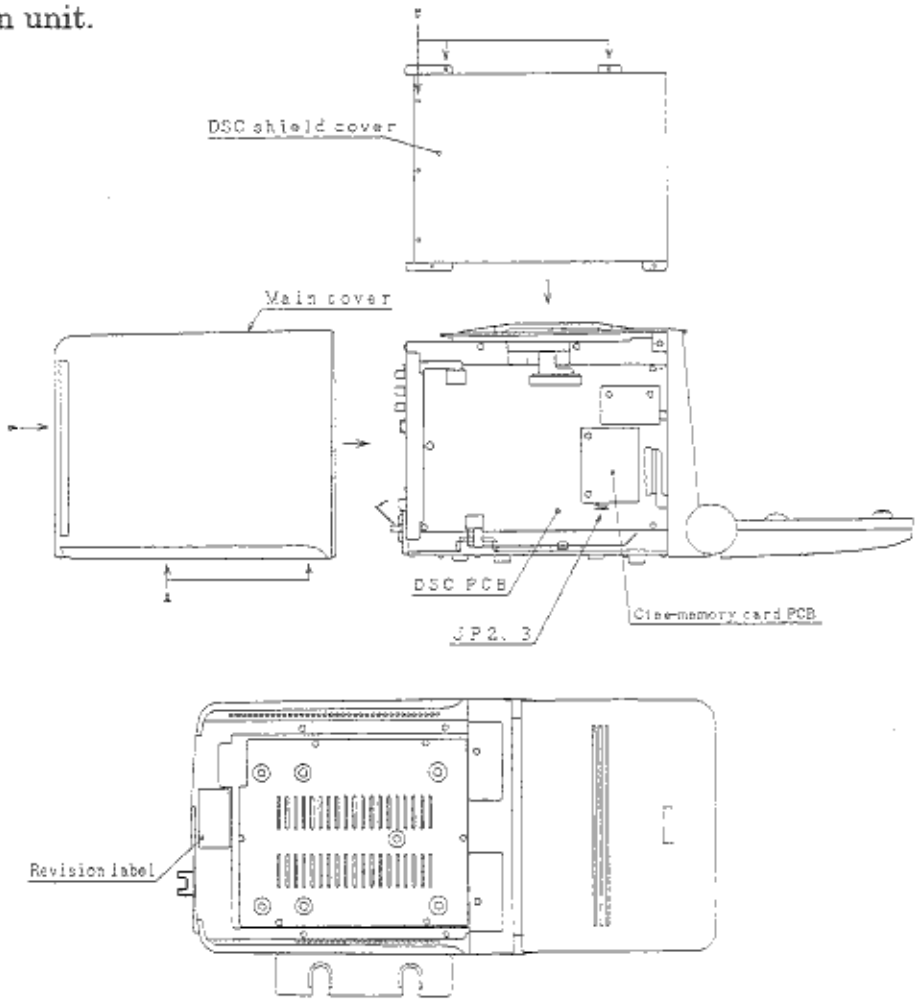


Fig.4-2 Mounting cine-memory unit

5. Installation of parallel printer unit (EZU-PR1)

5.1 Packing list

(1) Parallel printer PCB

(2) Revision label

5.2 Mounting RS232C port unit

(1) Main cover, DSC shield cover are removed.

(2) The blind plate is removed and moved to shield cover.

(3) Four screws of the part parallel printer PCB connector are removed, and it is installed in the connector panel and the DSC PCB.

(4) A cover is returned to the cause, and revision label is stuck on the back of the main unit.

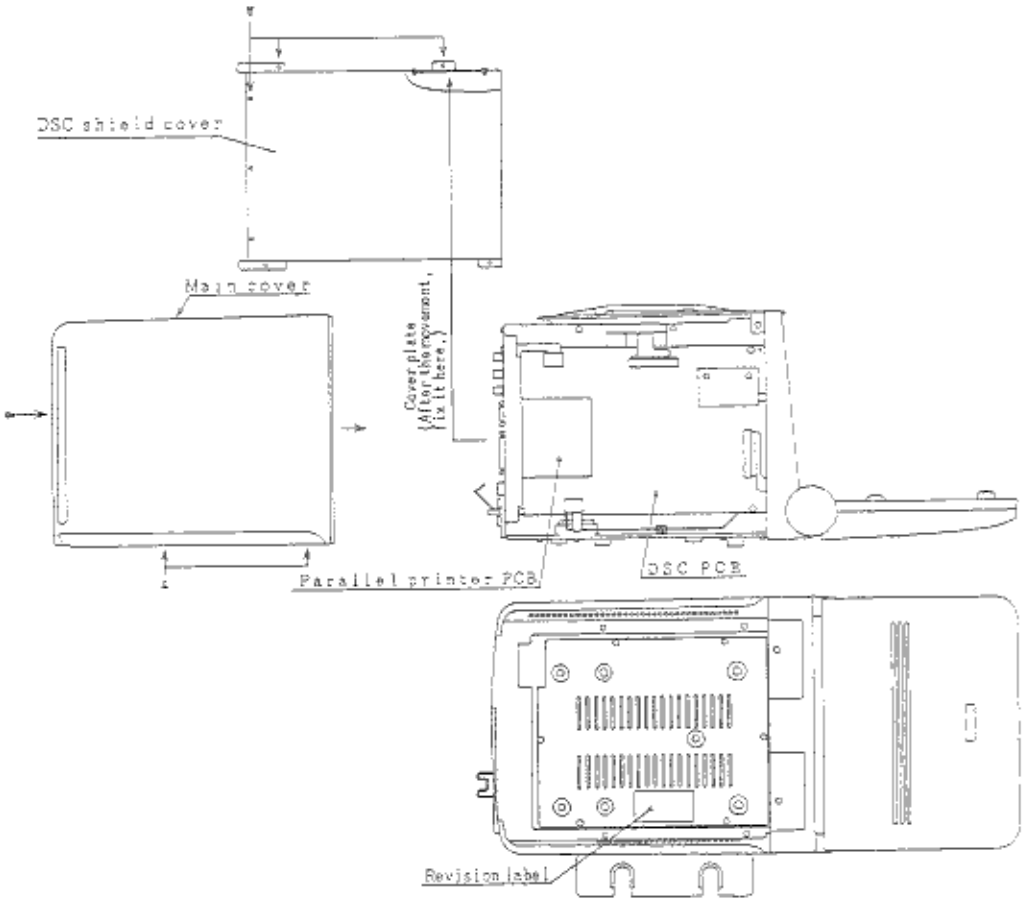


Fig.5-1 Mounting parallel printer unit

6. Installation of probe selector unit (EZU-PE61)

6.1 Packing list

(1) PROBE2 PCB
(2) Revision label
(3) M3 screw : 2

6.2 Mounting probe selector unit

(1) Main cover, handle cover are removed.
(2) The blind plate is removed and moved to handle cover.
(3) PROBE1 PCB is removed, and PROBE2 PCB is installed.
(4) PROBE1 PCB and a cover are returned to the cause, and revision label is stuck on the back of the main unit.

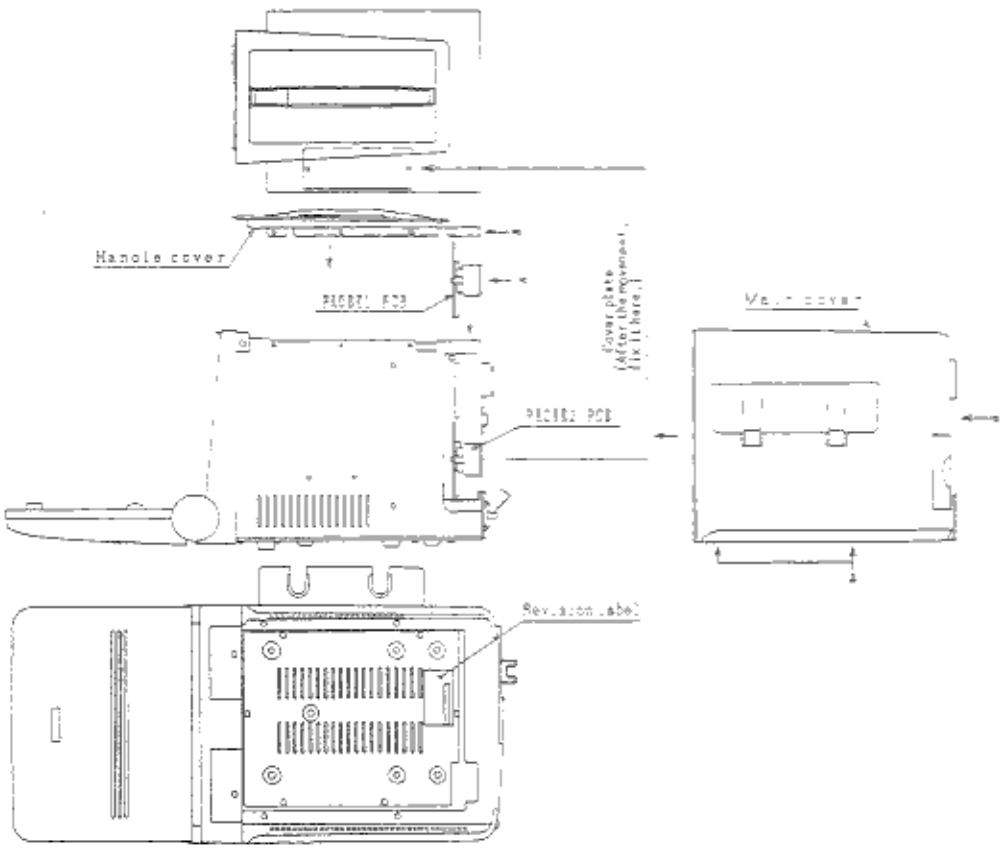


Fig.6-1 Mounting Probe selector unit

7. Entry procedure of needle guide line data

Registration of the needle guide line is essential to patient safety. Therefore, the registration data is not disclosed to the user and a Hitachi engineer or authorized dealer's engineer at installation of the equipment or when the user obtains the probe must carry out the registration.
(For registration of needle guide line, refer to Technical Guide (Installation) (L2E-EP0128).

8. Recharging built - in battery

The built-in rechargeable battery is usable as backup power supply for 2 to 3 months after the mains is turned off, however it may be needed to be recharged earlier due to conditions of storage and transportation of the equipment.

In case the clock has been reset since shipment from the factory (tables have also been reset), the battery has been usually discharged, so it must be recharged.
Turn on the power switch of the scanner for about two hours at installation.

It takes about 12 hours to fully charge up the battery. In case the user does not use the scanner for several days after installation, the battery will be discharged again. In such case, ask the user to turn on the power switch for several hours even if it will be without operation.

9. Operation check

After completion of the installation, check according to the instruction manual that all the functions can be normally operated.

10. Necessary tools

(1) Screwdriver 1

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